Nutrition News

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FAO ATTACKS NUTRITION PROBLEMS

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Historically speaking, the Food and Agriculture Organization of the United Nations has its roots in the science of nutrition. It is therefore natural that it should include a Nutrition Division which works in collaboration with other FAO divisions: Agriculture, Fisheries, Forestry, Economics and Statistics, Rural Welfare, as well as the Nutrition Section of the World Health Organization. The staff of the Nutrition Division now consists of 16 technical workers of 12 different nationalities.

Food and agriculture policies, both national and international, must aim at satisfying nutritional requirements. The Nutrition Division has the responsibility of ensuring that this concept underlies all activities of FAO and is constantly brought to the attention of Member Governments. Its working program covers a wide range. To establish satisfactory nutrition policies, knowledge of existing food consumption and of physiological requirements is needed.

The Division is concerned with methods of collecting and analyzing food consumption data. It has worked with the Economics and Statistics Division in the preparation of national "food balance sheets" which indicate national per caput consumption of foods and food groups and of certain nutrients. It has prepared a report entitled: "Diet Surveys—Their Technique and Interpretation." A closely associated activity is the study of food composition.

In 1949 the Division published "Food Composition Tables for International Use" which cover protein, fat, carbohydrates, and calories. It hopes to extend these to include other nutrients. As regards physiological requirements, in 1949 an expert committee considered the problem of calorie requirements on an international scale, and its report recently has been published. The next step will be the study of requirements of protein and other nutrients.

There are certain specific measures for improving nutrition which are of proven value. One is supplementary feeding. The Division has collaborated with the United Nations International Children's Emergency Fund (UNICEF) in the extensive supplementary feeding activities supported by that organization and has assisted various governments in initiating and expanding feeding programs. The subject has been placed on the agenda for regional nutrition conferences and committees. For example, in 1948 the Regional Nutrition Committee for South and East Asia recommended a special type of school meal as appropriate for children in rice-eating countries. Subsequently, meals based on this recommendation have been introduced in a number of countries in this region. Information about existing programs in different countries has been obtained. An international report on supplementary feeding, especially school feeding, is now being prepared.

The problem of increasing milk supplies is a closely associated one. In much of the world little or no milk is available to children after weaning. Through its Agriculture Division, FAO has collaborated with UNICEF in projects to increase milk supplies in Europe and has assisted countries in other parts of the world. To some extent milk shortages can be reduced by using imported milk products, especially dry skim milk. Technical aid from FAO is being utilized by some countries for expanding pasteurizing plants and establishing milk drying plants to produce "safer" milk.

Much can be done to improve nutrition through education. The Nutrition Division has prepared "Teaching Better Nutrition—A Survey of Approaches and Techniques" to be published late in 1950.

Dr. Aykroyd

Nutrition officers working in different regions provide direct assistance to member countries. For example, a member of the Division is now collaborating with the Institute of Nutrition for Central America and Panama, Guatemala, in making dietary surveys which will supply information needed in attacking problems of nutrition in this part of the world.

The convening of periodic nutrition conferences and committees in different regions is an important activity. Two of these have been held in the Far East and two in Latin America. The Second Conference on Nutrition Problems in Latin America, held in Rio de Janeiro in June, 1950, was attended by nutrition workers from nearly all countries in the region.

It is hoped that field activities of FAO will be extended through the "Technical Assistance for Economic Development" program. A considerable number of requests for assistance in developing nutrition work through this program already have been made by member countries.

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Glances AT NUTRITION RESEARCH

The facts uncovered by the scientist in his laboratory are enhanced in value as they are put to use. Human studies such as those presented below are readily adapted by those engaged in the development of normal and special diets for persons of all ages.

Dietary and Blood Cholesterol Levels—Diets designed to ward off hardening of the arteries have been based on the assumption that this condition is caused by high blood levels of cholesterol resulting from customarily eating liberal amounts of this material in animal foods. A recently reported study of several hundred men showed that the blood level of this fatty substance did not vary with cholesterol intakes over a range of 250 to 800 mg. daily. Even single large doses of cholesterol created only temporary and slight increases in blood cholesterol. By complete elimination of this substance from the diet, the amount in the blood could be lowered, but such diets were devoid of fat, were very low in protein, provided little sodium, and the energy intake was usually inadequate. The author seriously questioned the utility of the so-called low cholesterol diets in current use for the prevention of hardening of the arteries.

—Science 112:79 (July) 1950.

Effects of Omitting Breakfast—Men appear to react even more unfavorably to the omission of breakfast than do women. Ten normal young men in their twenties complained of hunger and experienced dizziness, nausea, and vomiting when they did not eat a morning meal. In addition, tremor magnitude increased, maximum work output was decreased, and choice reaction time was slower in most of the subjects when breakfast was omitted than when a basic breakfast of fruit, cereal, whole milk, sugar, toast, butter, and jelly was eaten.

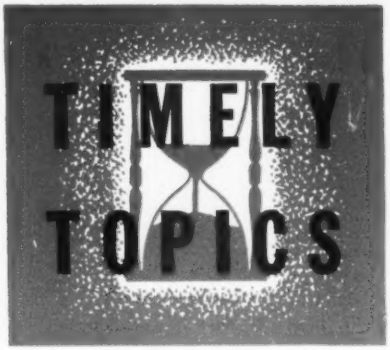
—J. Am. Diet. Assn. 26:332 (May) 1950.

Calcium Retention of Adolescent Girls—The adolescent girl appears to retain calcium according to her needs, if her diet provides an adequate amount of this mineral and she is in a state of good nutrition. This conclusion was reached following a study of the utilization of calcium by six girls, 13 and 14 years of age. Retention varied from 16 to 41 percent of an intake approximating one gram of calcium per day derived chiefly from milk, cheese, and ice cream. The girl retaining the greatest amount of calcium was in the stage of most rapid growth and the girl using the least of her dietary calcium had already passed the period of rapid growth.

—J. Nutrition 41:137 (May) 1950.

Iron Absorption—Evidently iron concentrates taken as treatment for nutritional anemia will be more effective if taken between meals than when consumed with food. This thought is expressed in a report on the iron absorption of adolescent boys in whom the utilization of isotopic iron (the radioactive form) was determined after its administration with water or with various combinations of food. The solid content of the accompanying food appeared to interfere with the absorption of the iron. It was also observed that rolled oats, which contain phytate, did not reduce the amount of iron absorbed beyond that accounted for by the bulk of the food, in spite of the fact that an equivalent amount of sodium phytate, fed as such, greatly decreased the absorption of this mineral.

—J. Nutrition 41:433 (July) 1950.



Dr. Aykroyd

The author of this issue's lead article has been with the Food and Agriculture Organization since 1946. His contribution to international nutrition began in 1930 as a member of the Health Section, League of Nations. Dr. Aykroyd also was Director of Nutrition Research in India for ten years; here he did research on nutritive value of Indian foods, food deficiency diseases, and diet surveys. Earlier accounts of FAO were reported in **Nutrition News** in October 1945 and February 1946.

White House Conference

Preconference and study groups across the country are considering problems and gathering facts preceding the Midcentury White House Conference on Children and Youth. In December representative leaders will propose action to help develop in children mental, emotional, spiritual, as well as physical qualities. Recommendations should be a guide to all who work with children.

Bread with Milk

As the amount of nonfat dry milk in bread was increased, bread consumption increased, in a recent study. The Division of Dairy Industry, University of California, served 320 boys, ages 8-16, bread baked with varying amounts of nonfat dry milk. Bread with 6 percent milk increased consumption 4 percent over bread with no milk; bread with 10 percent milk increased consumption 7 percent; bread with 14 percent milk increased consumption 12 percent.

NUTRITION EDUCATION FOR EXPECTANT MOTHERS

*By G. Dorothy Williams, Supervising Nutritionist**
Bureau of Nutrition, New York City Department of Health

"An adequate diet for expectant mothers" — how often that phrase is heard. Few alert plans for community nutrition programs omit this vulnerable group. Well planned work is based on needs and we in New York City are fortunate to have some information about food selected by expectant mothers who attended prenatal clinics in eight of our large hospitals in December, 1947. This survey by the Harvard School of Public Health at request of the New York State Food Commission, confirmed our impression of inadequate diets. Analysis of the one-day food record showed that only three percent met National Research Council Recommended Dietary Allowances for pregnant women.

At about this time, nutritionists from the Department of Health visited 88 hospitals to learn how much nutrition teaching is done in out-patient clinics and how we might help our nurses interpret instruction given patients. We found that 50 hospitals have prenatal clinics. In 37 of these instruction in nutrition is given by nurses or social workers, usually on an "as needed" basis.

Since so much instruction must be given by nurses, it seemed that the place to begin an education program was with this group who are sure to have contact with expectant mothers in out-patient prenatal clinics and with mothers in the hospital when they are most receptive to suggestions. Our opportunity came when the Bureau of Child Health of the Department asked us to cooperate in an institute for nurses from the obstetrical wards and out-patient clinics of all municipal hospitals. We discussed with these nurses: research in the relation of nutrition to the course of pregnancy and the health of mothers and babies; food habits of various national groups and how to help the expectant mother select an adequate diet, especially on a low income. There was eager response and requests for teaching materials for use in clinics. As a result of this institute the district nutritionists had requests from nursing staffs of several city hospitals for conferences on teaching aids.

Intensive Action

In one hospital in particular, the director of nursing, with consent of the medical superintendent, invited the nutritionist from the nearby health center to help with an in-service training program for nurses. Six lessons were given to nurses from the maternity ward and out-patient clinic, then to nurses from other divisions of the hospital. Later it was decided to include medical social workers.

Since many mothers who come to the hospital are newcomers from Puerto Rico and speak and understand only Spanish, the food problems of this group were stressed. Posters, exhibits, and leaflets were prepared in Spanish. A hospital dietitian was made available for a limited number of conferences on special problems. Student nurses made the posters for the clinic.

The district health officer long had been interested in an educational plan to combat the high infant mortality rate in his district. With cooperation of the Bureau of Health Education of the Health Department, a community-wide program of nutrition education began, especially emphasizing prenatal nutrition. The planning committee included obstetricians and pediatricians, as well as nurses, nutritionists, and health educators. It worked through churches, youth groups, high schools, and social clubs. All kinds of media were used. A committee from the local health council composed entirely of representatives of lay groups published a booklet listing local health and social agencies to which expectant parents could turn for help and stressing the importance of good health during pregnancy.

It is too soon to list results, but it is certain that interest is aroused. Such interest translated into action eventually brings results. Enthusiasm is great enough that several other areas in the city are saying, "Can't we do it too?"

*With cooperation of nutritionists in Bureau of Nutrition, especially Hilda Kreigenhofer, Julia Taylor, Marcella Garber, Avis Thyge.

WHAT DO ELEMENTARY AND JUNIOR HIGH SCHOOL PUPILS EAT FOR BREAKFAST?

By Lillian Mulvany, Principal
Lakeview Elementary School, Battle Creek, Michigan

To answer this question a survey of breakfast habits was made in elementary and junior high schools in Lakeview. This suburb has a population of about 16,000. Most of the families are of "good" educational and income level.

The objectives of the study were:

1. To find out the percentage of pupils who eat breakfast regularly.
2. What is eaten. Is it adequate?
3. If breakfast is omitted, why?
4. Does neglect or omission of breakfast affect the health of the pupils?
5. What can the teachers do to improve pupils' breakfast habits?

Sixth, seventh, and eighth grades were surveyed. The superintendent, principals, and teachers met for discussion and group planning; teachers were asked to cooperate but were not required to do so.

The teachers decided upon a four-week program. The first two weeks a sheet was given each morning to each pupil on which he recorded what he had eaten for breakfast. If omitted, he gave the reason. On Monday of the third week, the time of the evening meal, bedtime, and what was eaten before bedtime was reported. The time of arising and leaving for school were stated. On Tuesday, discussion of breakfast began. The last week pupils drew a breakfast pattern and judged their usual breakfast.

The record sheets showed misspelled words, which were included in spelling lessons. The pupils made posters and collected food pictures. They learned what children of other countries ate. Social studies, language, art, and arithmetic also included the study. The library and home economics department provided books and articles.

After discussing the best measuring device for evaluating breakfasts, it was decided that fruit, milk, and one other food was absolute minimum.

The study showed that from two to eight percent of the pupils omitted breakfast, the number increasing as they grew older. Minimum adequate

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DID YOU KNOW

—that a study of convalescent children's appetites concludes that a 7-ounce glass of milk an hour before each meal does not interfere with mealtime eating?

—that freshmen women in 1916 were an average of 62.92 inches in height and 119 pounds in weight and at present are an average of 64.16 inches in height and 123.33 pounds in weight?

—that the fat of about 28 percent of the milk produced in 1949 was used in the making of butter?

—that the output of the American farm worker has increased 50 percent in the last 12 years?

—that Romans believed that "One can not make cheese with the milk of animals which have teeth in two jaws, since this milk does not coagulate?"

—that milk and its products are the chief source of protein in the diet of the people of India?

—that of all of the ice cream purchased for home eating, about half of it is served as part of regular meals?

—that in 1949, 35 out of every 100 people in the world received only 2000 calories or less a day?

THINGS YOU'LL LIKE TO READ

The Nutritional Improvement of Life —Henry C. Sherman, Columbia University Press, New York. 1950. $3.75.

Human implications of the science of nutrition in the last half century are dealt with in terms of what they can mean for today and tomorrow. Discoveries are shown as successive steps not completed triumphs. The book includes 1946 World Food Survey, Food and Agriculture Organization. Dr. Sherman has written for layman or student because "nutrition is everyone's adventure."

These Are Your Children — Gladys Gardner Jenkins, Helen Shacter, and William W. Bauer, M.D. Scott Foresman and Company, Chicago. 1949. $3.50.

From the ages of five through adolescence this book gives readable account of the growth process. It shows interrelationship between physical, mental, and social development in the formation of personality. Highlighted are case histories and lively photographs. It is valuable for teachers, parents, and child-study groups.

You and Your Health — J. Roswell Gallagher, M.D., Science Research Associates, Inc., Chicago. 1950. 60 cents, including Instructor's Guide.

Young people will enjoy the intelligent, yet simple, manner in which Dr. Gallagher tells them what they can do to help improve adolescent growth and development, diet, and physical fitness and to help prevent disease and accidents. The "Eating" chapter describes basic food substances and everyday food needs. Humorous and pertinent drawings illustrate most of the 48 pages. This is an excellent booklet for all who work with teen-agers.

The Composition of Milks—Bull. No. 119. Food and Nutrition Board, National Research Council, Washington, D.C. 1950. Individual copy free on request.

This is a detailed compilation of comparative composition and properties of human, cow, and goat milk, and colostrum. It is especially useful to physicians, specialists, research workers.

WHAT DO ELEMENTARY AND JUNIOR HIGH SCHOOL PUPILS EAT FOR BREAKFAST?

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breakfasts ranged from 19 to 44 percent. Fewer eighth grade pupils ate a good breakfast. Is this because mothers are less careful to supervise breakfasts as children grow older? Is the "family" breakfast disappearing? Many pupils reported getting their own breakfast or eating only with a sister or brother.

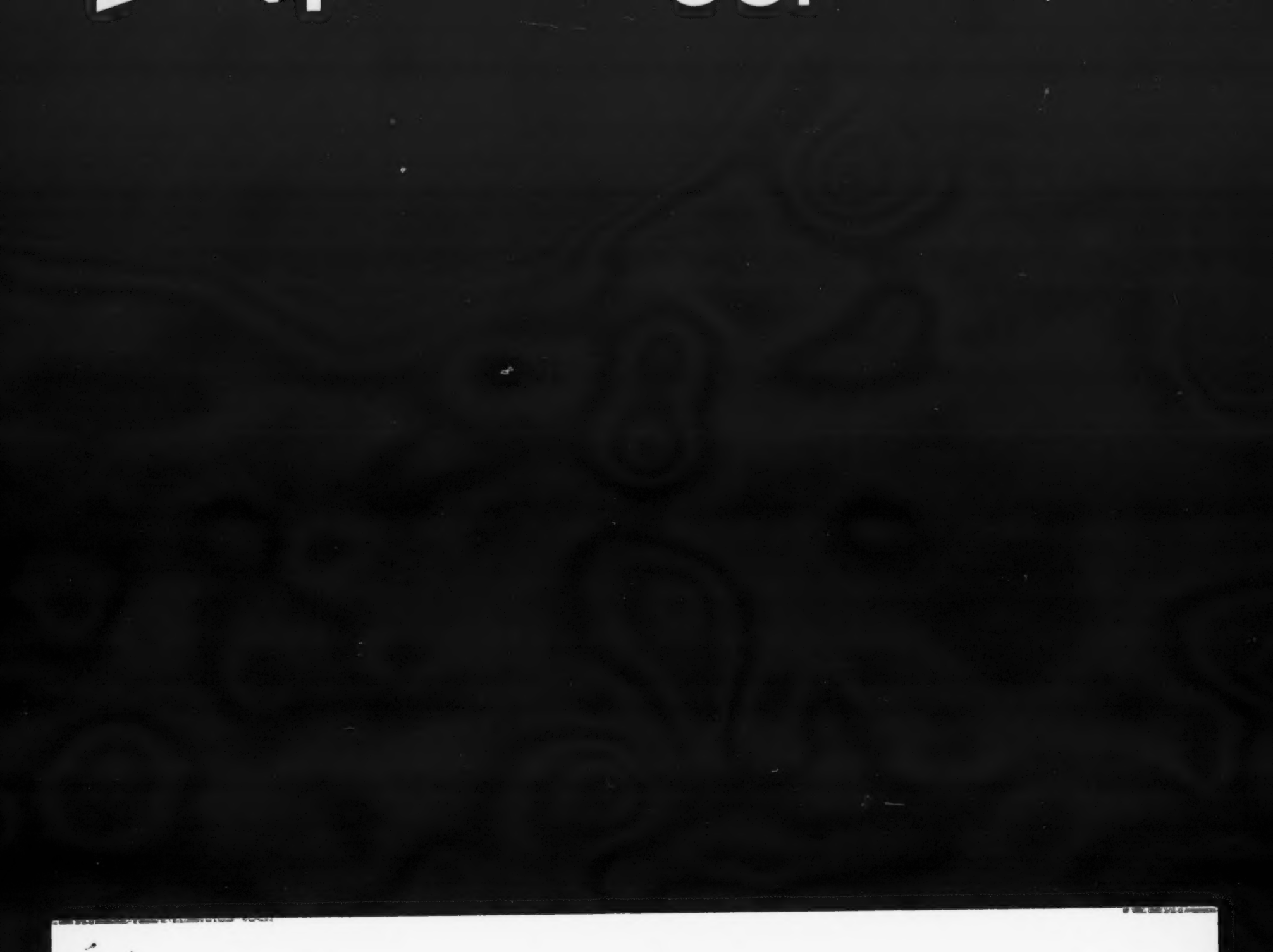
Reasons for omitting breakfast were:

1. Lack of time due to sleeping late.
2. Hurry to get to school on time.
3. Not feeling well in the morning.
4. Not hungry.
5. On a diet or wishing to reduce.
6. Excitement over unusual situation.

The percentage of breakfasts having fruit ranged from 36 to 58; cereal, 29 to 63; milk, 56 to 80. The Nutrition Department, Michigan State College, became interested and took vitamin C blood level of one hundred pupils. Staff members came to our school, made finger punctures, and analyzed blood samples. Fifty-three out of seventy-seven reliable samples showed dangerously low vitamin C level. It appears that if fruit is omitted at breakfast it is not often eaten later in the day.

Follow-up Program

The Lakeview Health Council thought the study so important that it recommended a concentrated nutrition program of two months. Teachers welcomed the recommended follow-up, and willingly cooperated.

At the end of the program, reports were made and compared with those of the first study. Improvement was striking. In one grade breakfasts with fruit, cereal, and milk rose from 30 to 50 percent. Minimum adequate breakfasts were eaten by twice as many pupils; fewer reported no breakfast.

Perhaps the greatest value of the study is increased interest in better breakfasts. Teachers and pupils are more conscious of nutrition and in all probability this subject will be a regular part of the classroom work. It is hoped that parents who were informed of the results by their children will feel an added responsibility toward good breakfasts.